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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,266	12/16/2004	David Keith Roberts	NL 020546	3560

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER
PERUNGAVOOR, VENKATANARAY

ART UNIT	PAPER NUMBER
2432	

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01/18/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/518,266	ROBERTS, DAVID KEITH
	Examiner	Art Unit	
	Venkat Perungavoor	2432	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _09 November 2010_.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,3-7,12,14 and 15_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1,3-7,12,14-15_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pages 5-7, filed 11/9/2010, with respect to the

rejection(s) of claim(s) 1, 3-7, 12, 14-15 under 35 USC 102(b) as anticipated by USPN

6442284 to Gustafson have been fully considered and are persuasive. Therefore, the

rejection has been withdrawn. However, upon further consideration, a new ground(s) of

rejection is made in view of Security Camera Video Authentication to D.K. Roberts, US

PN 6512837 to Ahmed, A Survey of Watermarking Algorithms for Image Authentication

by Rey et al.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in
public use or on sale in this country, more than one year prior to the date of application for patent in
the United States.

Claims 1,3,5,12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Security Camera Video Authentication to D.K. Roberts.

Regarding Claim 1, Roberts discloses A microprocessor programmed to perform the

steps of:

dividing a whole image that contains at least one region of fiat content

into a plurality of regions see Page 126 § 3.2 Semi-fragile digital signatures and

fingerprints Par. 3;

generating a signature including generating signature bits from each of the plurality of

regions including the at least one region of fiat content see Page 127 § 4.1 Fingerprint

calculation see Par. 4(where the low frequencies and low complexity represents flat

content);

embedding the signature generated without subdividing the signature by spreading the

signature bits of the signature across at least a portion of the image which is larger than

one of the regions, such that the signature bits from all regions can be extracted even if

the at least one region of fiat content has been replaced by tampering whereby the

image is protected from tampering in the at least one region of flat content see page

127 §3.2.1(embedding of fingerprint into image).

Regarding Claim 3, Roberts discloses the signature is embedded as a watermark see

Page 126 §3.1.

Regarding Claim 5, Roberts discloses the watermark is embedded according to a trade-

off between a payload size of the image, a robustness of the watermark, and a visibility

of the watermark see Page 126 §3.2 Par. 2.

Regarding Claim 12, Roberts discloses A non-transitory computer readable medium

having a plurality of computer-executable instructions which instructs a

microprocessor to authenticate images, the computer executable instructions

comprising:

a first program module which generates instructions for a computer for

dividing the images into regions, at least one of the regions including an area of flat

content see Page 126 § 3.2 Semi-fragile digital signatures and fingerprints Par. 3;

a second program module which generates instructions for a computer for

generating a signature, the signature being generated by generating at least one

signature bit from each of the regions see Par. 4(where the low frequencies and low

complexity represents flat content); and

a third program module which generates instructions for a computer for

embedding the signature in the images without subdividing the signature, such that

the signature is spread across at least a portion of the image which is larger than one

of the regions such that the area of flat content is protected from tampering see page

127 §3.2.1(embedding of fingerprint into image).

Claims 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by

USPN 6512837 to Ahmed.

Regarding Claim 14, Ahmed discloses A method of authenticating an audio
video signal, the method comprising:

receiving at least one video image with a processor see Fig. 1 item 100;

with the processor, dividing the video image into a plurality of regions

including at least one region of flat content and a plurality of regions with non-flat

content see Fig. 1 item 102(where the flat content and non-flat content is inherent in

video images);

with the processor, generating at least one bit of a signature from each of

the regions including from the at least one region of flat content see Col 2 Ln 24-

36(where the quantized values are encoded into a signature);

with the processor, embedding the signature only in the plurality of

regions with the non-flat content see Col 3 Ln 38-50; and

subsequently with the same or a different processor, extracting the

signature bits from the plurality of regions with the non-flat content and, from the

extracted bits, determining if the at least one region of flat content has been subject to

tampering see Col 3 Ln 60-Col 4 Ln 2(where the extracting of signature bits and

comparing to determine alterations).

Regarding Claim 15, Ahmed discloses One or more processors programmed to

perform the method according to claim 14 see Col 6 Ln 30-40.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Security Camera Video Authentication to D.K. Roberts in view A survey of

Watermarking Algorithms for Image Authentication by Rey.

Regarding Claim 4, Roberts does not disclose the spread spectrum. However, Rey

discloses the watermark is a spread spectrum watermark see Page 617 § 2.3.2 Block-

based watermark Par. 6(where the watermark is a spread spectrum).

It would be obvious to one having ordinary skill in the art at the time of the invention to

include the spread spectrum in the invention of Roberts in order to have watermark that

is robust as taught in Rey see Page 617 § 2.3.2 Block-based watermark Par. 6.

Regarding Claim 7, Roberts does not disclose the spreading of signature and extracting from multiple areas. However, Rey discloses decomposing the signature bits to multiple areas or a single large area within the image such that information needs to be extracted from the multiple areas or the single large area within the image, in order to evaluate the original signature bits see Page 617 § 2.3.3 Feature-based watermark Par. 1.

It would be obvious to one having ordinary skill in the art at the time of the invention to include the decomposing of signature bits and extracting signature from multiple areas in the invention of Roberts in order to have watermark that is robust as taught in Rey see Page 617 § 2.3.2 Block-based watermark Par. 6.

Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Security Camera Video Authentication to D.K. Roberts in view USPN 6512837 to Ahmed.

Regarding Claim 6, Roberts does not disclose the embedding multiple times in different locations. However, Ahmed discloses each signature bit is embedded multiple times in different locations within the image see Col 2 Ln 44-50.

It would be obvious to one having ordinary skill in the art at the time of the invention to include a signature to be embedded multiple times in different locations in the invention of Roberts in order to increase robustness as taught in Ahmed see Col 2 Ln 44-50.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Venkat Perungavoor whose telephone number is (571)272-7213. The examiner can normally be reached on 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. P./
Examiner, Art Unit 2432

January 6, 2011